

KOBER (G. M.)

THE PLACE
OF
MILITARY
Medicine and Surgery
IN THE
MEDICAL COLLEGE
CURRICULUM

A PAPER PRESENTED TO THE
ASSOCIATION OF MILITARY SURGEONS
OF THE UNITED STATES,

AND REPRINTED FROM THE
PROCEEDINGS OF THE
SEVENTH ANNUAL
MEETING.

By GEORGE M. KOBER, M. D.,
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PERHAPS few men will question that Military Medicine and Surgery should have a place in the medical college curriculum; those who are in doubt will simply have to recall our history in the past and consider the possibilities in the future. There is no country of its size which has a smaller standing army, and perhaps no country in the world which may find itself so readily in the throes of a civil war than our own, and "as our strength and safety are in a general dissemination of military knowledge among the people," so the character and efficiency of the Medical Officers of our future armies must depend upon the training received in our medical schools in Military Medicine and Surgery.

In the fall of 1874, while stationed as an Acting Assistant Surgeon on the Pacific Coast, I read in one of the German periodicals, an extract from an oration delivered by Rudolf Virchow on "The Progress of Military Medicine." Since the Germans are accustomed to speak highly only of the practical talent of Americans, but shrug their shoulders in a very significant manner about our scientific attainments, I translated the opinion of this masterly and certainly not over-indulgent critic for the Pacific Medical and Surgical Journal, November, 1874. In speaking of infectious diseases and the lessons of war, he says:

"Truly it is fearful to think of the school of suffering which the armies had to pass through before the truth was finally acknowledged. In the Crimean war the French army lost one man out of three of the whole army, and it is estimated that of the 95,615 lives lost only 10,240 fell before the foe. About as many died of wounds in the hospitals, and the rest, more than 75,000

men, died of infectious diseases. It is calculated that in the American war of secession 97,000 men fell in battle, and 194,000 perished of infectious and other diseases. What an excess of pain and sorrow, what an ocean of blood and tears are contained in these figures! And what a mass of false regulations, and prejudices and misunderstandings, too! It is not necessary to recount here the long lists of sins and mistakes. These are known too well and serve as a terrible warning to others. But it must here be acknowledged, that it was not the necessity alone that revealed the evil and brought the help. That the French in the Crimea learned from their experiences little or nothing, and the Americans in their civil war so much as to create a new era in military medicine—these results were brought about not by the magnitude of the need which the Americans had to suffer—for this was not greater than that experienced by the French in the Crimea,—but rather by the critical and truly scientific spirit, the open mind, the sound and practical common sense which in America gradually permeated all departments of army organization, and which, under the wonderful co-operation of an entire nation, reached the highest point in humane efforts ever attained in a great war. Whoever takes up and reads the extensive publications of the American medical staff will be constantly astonished at the wealth of experience therein found. The greatest exactness in detail, careful statistics, even about the smallest matters, and a scholarly statement embracing all sides of medical experience are here united in order to preserve and to transmit to contemporaries and posterity in the greatest possible completeness the knowledge purchased at so vast an expense.”

This happy appreciation of Professor Virchow of our achievements in Military Medicine applies to an epoch where the United States with a small standing army and a small corps of trained Medical Officers were suddenly involved in a gigantic war, absolutely unprepared for the struggle, except that we had men gifted with good common sense, powers of observation and application and a generous nation to provide over fifty million dollars for the care and treatment of our sick and wounded. I naturally asked myself the question, if the American Medical Staff accomplished so much without special training, how much more might have been achieved had the Medical Officers enjoyed preliminary in-

struction in Military Medicine and Surgery, such as is given at the Army Medical School at Netley, or in the Friedrich Wilhelm Universität at Berlin. But someone will say, "Necessity is the mother of invention," "Experience is the best teacher," "We did it before, and we can do it again."

Yes, but how did we do it? Shall the future medical historian be compelled to chronicle the fact, that ten days after the first engagement "600 wounded still remain on the battle field in consequence of the insufficiency of ambulances and the want of a proper system for regulating their removal; many have died of starvation, many more will die in consequence of exhaustion, and all have endured torments that might have been avoided."

Virchow's comments were based upon 97,000 men, who died of their wounds, and 194,000 who perished from infectious and other diseases. As a matter of fact, the total deaths in the Union Army numbered 359,496, over 15 per cent. of the entire number of enlistments. Of this number 224,586, or nearly two-thirds died from disease, while 134,910 were killed in battle or died from the effects of wounds. Indeed it is calculated that in our Civil War the Union Army treated over six million cases, including 151,384 cases of continued fever, mostly typhoid; 1,739,135 cases of diarrhoea and dysentery, with 44,558 deaths; there were also 76,318 cases of measles, with 5,177 deaths; 18,952 cases of small pox, with 7,058 deaths, and 24,812 cases of erysipelas, with 2,107 deaths.

Think of this array of preventable diseases? Consider, if you please, the fact that in addition to the terrible sacrifice of human life, a generous nation expends one hundred and forty millions a year for the support of invalids of this war.

Who can deny that, had the Medical Officers of the late war known more of army diseases, their causes and prevention, had they appreciated the importance of accurate and complete hospital records, our pension roll would be smaller and a just discrimination would have been possible between deserving invalids and malingerers, and individuals who studiously arrived at a deterioration of their physical condition in order to enlist sympathy and a higher rate of pensions.

Shall the sins of omission and commission, the prejudices and false regulations be repeated? No; for they are too well known and serve as a terrible warning to others. But how shall this

warning be heeded? Simply by transmitting in the medical schools of this country to contemporaries and posterity the knowledge purchased at so vast an expense. Our medical colleges have very generally introduced instructions in personal and public hygiene, in fact the medical profession is striving every day to lessen sickness by the enactment of health-laws, and to thereby cut off its own revenue, and there should be no difficulty in convincing medical schools that it is a patriotic duty to establish courses of instruction in military surgery and sanitation.

After the receipt of Major Hoff's lecture on "The Military Medical Officer in Peace and War," delivered at the Medical School of Harvard University in November or December, 1894, I was requested by the Medical Faculty of Georgetown University to supplement my instructions in hygiene with a course on Military Surgery and Medicine, and I am convinced that interest in the general course on hygiene has been stimulated thereby. It is no more difficult to interest the average student in this than in any of the subjects taught, provided the course is made obligatory and he is required to pass a satisfactory examination. This is sufficient to insure prompt attendance and attention, but apart from this we can appeal to the patriotism and ambition of the student. In my introductory remarks I point out the advantages of a medical career in the Army, Navy and Marine Hospital Service, and that merit alone is the key to success; reference is made to the status of Medical Officers in the National Guards, and their usefulness in time of peace, as educators of the masses in the principles of personal and public hygiene, first-aid and transport of suffering humanity, and lastly, attention is directed to the fact that, in the event of a war, when the services of one Medical Officer for every 150 fighting men are required, it will be clearly their duty to contribute their share for the nation's defense and the manner of doing it will largely depend upon their preliminary training.

It cannot be expected that every young physician will choose the army or other public services for his professional career, but there will be ample opportunities for the application of the knowledge thus acquired as sanitary officers in connection with health-boards, as physicians and surgeons in charge of private or State hospitals, reform schools, jails, prisons, asylums, ship and police surgeons, pension examiners, surgeons in the employ of railroad

and mining companies, surveying expeditions, medical examiners of insurance companies, and in the home of almost every patient. When a student is told, for example, that the general rules to be observed in the examination of recruits will enable him to select able-bodied men for the police force and life insurance policies, and that the question of food, its preparation and the care of cooking utensils are of practical importance in the management of his patients, his interest in these subjects will be stimulated. Indeed he will soon learn that the aphorisms of the army cook's creed are not less applicable to the civilian. Take for instance the following, the truth of which the soldier learned from bitter experience:

"Cleanliness is next to godliness both in persons and kettles. It is less dangerous to work your elbows than your comrade's bowels. Remember that beans badly boiled kill more than bullets, and too much grease is more fatal than powder."

The average student of to-day will not forget the import of these aphorisms, and takes pride in being able to explain that dirty and greasy pots furnish food for certain saprophytic germs and consequent toxic products, which in turn produce gastro-enteric disorders,—that an excess of grease and improperly cooked beans render the digestive tract vulnerable to the germs of water-borne diseases like typhoid fever and dysentery and are to a great extent directly responsible for the many cases of simple and chronic diarrhoea. He will also appreciate the many circumstances under which he may be called upon to investigate an outbreak of so-called cholera morbus, due perhaps to improper food. It is very important to refer to the *practical* application of the knowledge thus acquired under the varied conditions of both civil and military life.

It goes without saying that the student of military medicine should be perfectly familiar with the principles of personal and public hygiene. My lectures on hygiene are delivered to third and fourth year classes, and the course extends over two sessions, at the end of which the lectures on military hygiene and surgery are given.

Among the subjects discussed are:

1. The national necessity of instruction in military sanitation and surgery in our medical schools.

2. The duties of Medical Officers, professional and administrative.
3. The duties of Medical Officers as sanitary officers.
4. The importance of examination of recruits, and discharges on surgeon's certificate.
5. The training of the Hospital Corps.
6. The hygiene of troops in permanent posts.
7. The hygiene of troops upon the march and in camps.
8. Preparation and supplies for field service and active hostilities.
9. Modern firearms, explosives and projectiles.
10. The effects of modern firearms in battle and probable amount of surgical work in a given number of wounded.
11. General consideration of gunshot, sabre and bayonet wounds, primary symptoms and complications of gunshot wounds.
12. First-aid and transport of the sick and wounded.
13. Dressing stations, field, base and general hospitals.
14. Secondary complications of gunshot injuries.
15. The ultimate results of gunshot wounds, especially after excisions of joints.
16. Army diseases, their causes and prevention.

Last year I handed the examination papers to Surgeon Charles Smart, U. S. Army, and asked him to kindly rate them as he would before an Army Medical Board. According to his estimate only one man dropped below 75 out of a possible hundred. In conclusion, it affords me great pleasure to state that the course on Military Surgery in the Georgetown Medical School will be much more thorough hereafter, as the subject, upon my own request, has been assigned to Colonel and Assistant Surgeon General W. H. Forwood, U. S. Army, Professor of Surgical Pathology and Military Surgery.

